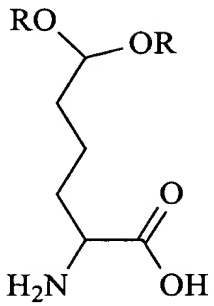
IN THE CLAIMS

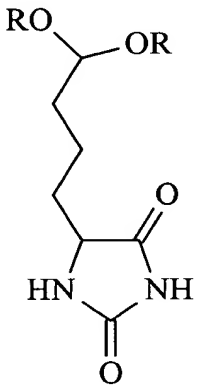
--1. (Currently amended) A process for the preparation of allysine acetal of the general formula (I)



(I)

comprising:

contacting a hydantoin of the general formula (II):



(II)

wherein in formulae (I) and (II) R represents (C_1-C_8)-alkyl, (C_2-C_4)-alkylene, (C_6-C_{18})-aryl, (C_7-C_{19})- aralkyl, or (C_1-C_8)-acyl,

with a hydantoinase and a D- or L-specific carbamoylase in the presence of at least one hydantoin racemase ~~selected from the group consisting of a hydantoin racemase and carbamoyl racemase~~,

under conditions suitable for *in situ* racemisation of the hydantoin or of an N-carbamoyl amino acid.

2. (Previously presented) The process of Claim 1, wherein at least one of the hydantoinase, a D- or L-specific carbamoylase, or the at least one racemase is in at least one form selected from the group consisting of free form, immobilized form, cell fraction form, cell extract form, and in a form enclosed in a cell.

3. (Original) The process of Claim 1, wherein the *in situ* racemization is spontaneous, enzyme-catalyzed, or both.

4. (Previously presented) The process according to Claim 1,

wherein the hydantoin racemase, the hydantoinase, and the L- or D- specific carbamoylase are present in a total cell catalyst.

5. (Previously presented) The process according to Claim 4,

wherein the total cell catalyst comprises an L-specific carbamoylase.

6. (Original) The process according to Claim 4, wherein said total cell catalyst comprises L-specific carbamoylase.

7. (Previously presented) The process according to Claim 6, wherein the recombinant bacterium is *Escherichia coli.*

8. (Previously presented) The process according to Claim 1

wherein

the contacting is carried out in an enzyme-membrane reactor.

9. (Canceled)

10. (Previously presented) The process according to Claim 1, wherein the contacting is performed in the presence of a metal salt.

11. (Canceled)

12. (Previously presented) The process of Claim 4, further comprising developing the total cell catalyst from at least one cell that comprises at least one cloned gene coding for at least one member selected from the group consisting of a hydantoin racemase, hydantoinase, L-specific carbamoylase, and D-specific carbamoylase.

13. (Previously presented) The process of Claim 4, wherein the total cell catalyst is at least one member selected from the group consisting of *Escherichia coli* JM109, *Escherichia coli* NM 522, *Escherichia coli* JM105, *Escherichia coli* RR1, *Escherichia coli* DH5α, *Escherichia coli* TOP 10^{-}, and *Escherichia coli* HB101.

14. (Previously presented) A method for producing a pharmaceutical or a biologically active product, comprising contacting the allysine acetal of the general formula (I) produced

by the process of Claim 1 with a pharmaceutically-acceptable or a biologically-acceptable ingredient, excipient, or carrier.

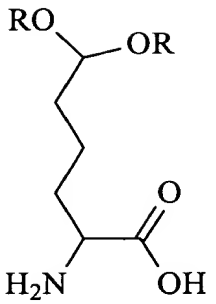
15. (Previously presented) The process of Claim 1, wherein the contacting is performed so that the allysine acetal of the general formula (I) is produced at an optical purity of at least 90%.

16. (Previously presented) The process of Claim 1, wherein the contacting is performed so that the allysine acetal of the general formula (I) is produced at a yield of at least 85%.

17. (Previously presented) The process according to Claim 1, wherein the contacting is performed at a pH of from 5.5 to 8.5.

18. (Previously presented) The process according to Claim 1, wherein the contacting is performed at a temperature of from 20 to 40 °C.

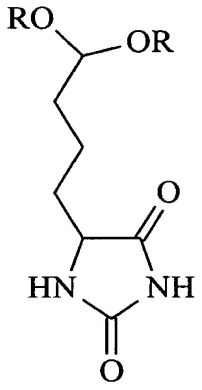
19. (Currently amended) A process for the preparation of allysine acetal of the general formula (I)



(I)

comprising:

contacting a hydantoin of the general formula (II):



(II)

wherein in formulae (I) and (II) R represents (C_1-C_8)-alkyl, (C_2-C_4)-alkylene, (C_6-C_{18})-aryl, (C_7-C_{19})- aralkyl, or (C_1-C_8)-acyl,

with a hydantoinase;

contacting the hydantoin with a D- or L-specific carbamoylase; and

contacting the hydantoin with at least one hydantoin racemase ~~selected from the group consisting of a hydantoin racemase and carbamoyl racemase~~,

wherein the contacting is performed under conditions suitable for *in situ* racemisation of the hydantoin or of an N-carbamoyl amino acid.

20. (Previously presented) The process according to Claim 19, wherein the contacting of the hydantoin with the hydantoinase, D- or L-specific carbamoylase, and the at least one racemase are performed sequentially or continuously.